

REMARKS

Before discussing the subject matter recited in the claims of this application and as a preface to commenting on the issues raised in the most recent Official Action, the following general overview is provided of characteristics associated with a process for the treatment of the glass sheets of an asymmetric pair of glass sheets according to at least one embodiment described and illustrated in the present application.

As discussed in the last full paragraph on page one of the specification, with asymmetric pairs of glass sheets, the differences between the individual sheets provide different heating and heat-absorption properties. Thus, thinner glass sheets, or sheets absorbing heat more intensely, heat up more rapidly than thicker glass sheets, or sheets absorbing less heat or reflecting heat, and therefore reach higher temperatures more rapidly under identical heating conditions.

During a process for the treatment of the glass sheets of an asymmetric pair of glass sheets for the production of a laminated window, the asymmetric pair of glass sheets are preheated, then undergo a press-bending process, and are finally cooled. As discussed in the first paragraph on page three of the specification, a process according to an exemplary embodiment is controlled in such a way that the two glass sheets are at substantially the same temperature after completion of the press-bending process by, for example, cooling the hotter sheet, whereby it has surprisingly been found that identical bending behavior can be achieved.

Turning now to the claims, independent Claim 1 is rejected as being unpatentable over European Application Publication No. 398759, hereinafter Yoshizawa, in view of U.S. Patent No. 4,738,704, hereinafter Vanaschen.

Yoshizawa discloses a method of heating glass sheets for laminated glass. As discussed in lines 30-35 of page 3 of Yoshizawa, "[W]hen glass sheets are heated under the same conditions, the temperatures T_o of the colored glass sheets at the exit of the heating furnace are generally higher than the temperatures T_o of the colorless glass sheets at the exit of the heating furnace. ... [T]he glass temperature T_o at the heating furnace is higher if the glass sheet thickness is smaller." Accordingly, Yoshizawa recognizes that asymmetric glass sheets respond differently to heat. Specifically, under the same heating conditions, colored glass sheets heat up to a higher temperature than colorless glass sheets, and thinner glass sheets heat up to a higher temperature than thicker glass sheets, i.e., the heating rates are different for the same heating conditions. Moreover, an ordinarily skilled artisan would understand that asymmetric panes also respond differently to the same cooling conditions.

The Official Action correctly notes that Yoshizawa does not disclose that Yoshizawa's preheating and/or press-bending process are controlled in such a way that the two glass sheets are at substantially the same temperature after completion of the press-bending process as recited in Claim 1. The Official Action goes on to take the position that Vanaschen cures the above-noted deficiencies in Yoshizawa. Specifically, the Official Action states that "VANASCHEN discloses that is imperative that glass sheets be at the same temperature after pressing because the smallest difference in cooling conditions between the two sheets will lead to deformations which make that laminated glass sheets unusable (col. 1, lines 58-62)." This is not so.

As a first point, the method referred to in that portion of Vanaschen is "another known method" involving "the press bending of individual glass sheets while they are suspended", as discussed in lines 55 and 56 of col. 1 of Vanaschen. However, there is no reference in this or any other portion of Vanaschen to asymmetric glass sheets. It is clear from a careful study of Vanaschen that, if anything, Vanaschen's disclosure is relevant to, if anything, processing of symmetric glass sheets. Moreover, as discussed above, asymmetric glass sheets respond differently to heating and cooling than symmetric glass sheets, and so the results of applying the teachings of Vanaschen's heating and cooling of symmetric glass sheets to a process involving asymmetric glass sheets would not have been predictable to an ordinarily skilled artisan.

An ordinarily skilled artisan would also recognize that Vanaschen's disclosure simply means that after the press bending stage, the cooling conditions, e.g., the time/temperature profile during cooling, for each bent glass sheet should be substantially the same, not that the temperature after press-bending should be substantially the same. Thus, even assuming for the sake of discussion that an ordinarily skilled artisan would have modified Yoshikawa's process in view of Vanaschen's teachings, the same cooling conditions would have been applied to Yoshikawa's asymmetric glass sheets. However, as discussed above, asymmetric glass sheets respond differently to the same cooling conditions and thus, the asymmetric glass sheets would, if anything, have different temperatures under the same cooling conditions. Thus, even if some reasonable basis did exist to combine the teachings of Vanaschen and Yoshikawa, the resulting process would not have included the preheating and/or the press-bending process being controlled in such a

way that the two glass sheets are at substantially the same temperature after completion of the press-bending process as recited in Claim 1.

Claim 1 is therefore allowable over Yoshikawa and Vanaschen, and withdrawal of the rejection of Claim 1 is respectfully requested.

Claim 15 is rejected as being unpatentable over the disclosures in Yoshikawa, Vanaschen, and a tertiary reference. However, for reasons consistent with the above discussion of Claim 1, a process for the treatment of the glass sheets of an asymmetric pair of glass sheets for the production of a laminated window including controlling the preheating and/or the press-bending so that the glass sheets are at substantially the same temperature after press-bending the glass sheets as recited in Claim 15 would not have been obvious to an ordinarily skilled artisan. Withdrawal of the rejection of Claim 15 is therefore also respectfully requested.

The dependent claims are allowable at least by virtue of their dependence from allowable independent claims. Thus, a detailed discussion of the additional distinguishing features recited in the dependent claims is not set forth at this time.

Early and favorable action with respect to this application is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at the number indicated below.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.20(d) and 1.21 that may be required by this paper, and to

credit any overpayment, to Deposit Account No. 02-4800.

Respectfully submitted,

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